

### **Remarks**

#### **Drawings**

Amended paragraphs of the specification are filed which mention the reference characters 19, 24, 30, 36 and 50. This traverses the objection to the drawings.

#### **Abstract**

A replacement abstract is attached which refrains from using claim language.

#### **Claim Objections**

Claims 3, 7 and 13 have been amended to correct the informalities noted in those claims. Claim 3 now recites "a DC offset applied to the output of one of said detectors" to be consistent with what is described in the application (see Figure 3, "D.C. offset Control Circuit" 115 and the positive input to difference amplifier 114.)

#### **Claim Rejections – 35 USC § 102**

Examiner rejects claims 1-5, 7, 9, 11 and 13-14 under 35 USC §102(e) as being anticipated by Sahlman (US 2002/0048326). Examiner's rejection is respectfully traversed in view of the following remarks.

The present invention provides a way of overcoming errors which can occur in the amplitude/phase comparator system 100 of a predistorter amplifier. As shown in Figure 2 of the present application, a reference signal 42 (derived from the input) and a feedback signal 54 (derived from the output) are applied to the comparator 100. There are two detectors 110, 112 and a difference amplifier 114 which derives the difference between outputs of the detectors. An arrangement of switches 104a-104d, 108a-108d alternately connects signal 42 to the first detector 110 and signal 54 to the second detector 112, and signal 42 to the second detector 112 and signal 54 to the first detector 110.

54 to the first detector 110. As described at page 10 line 27 – page 11 line 11 this helps to overcome, *inter alia*, differences in the characteristics of the first and second detectors 110, 112 and thus provides a more accurate predistortion of the input to the amplifier.

Examiner has briefly referred to passages of Sahlman which are alleged to teach the features of Claim 1. However, Applicants cannot find basis in these passages for the limitations of Claim 1.

Sahlman teaches an up-converter to RF, which includes a Main Power Amplifier (MPA). Paragraph 73 and Figure 13 of Sahlman, which the Examiner refers to, describe how an output of the MPA 1327 is sampled 1328 and applied to a comparator 1332. A reference Up-Converter 1310 applies a reference input to the comparator 1332.

There is no teaching in Sahlman that the amplifier output (sampled at 1328) is "normalised to the amplifier input signal level". An attenuator 1329 is shown, but paragraph 73 simply states that this gain adjusts the sampled signal.

There is no teaching in Sahlman that "switch means alternately couples a first and second detector means to the input and output of said amplifier". Firstly, Sahlman lacks first and second detectors. No such detectors are shown in Figure 13 or described. Secondly, Sahlman lacks any teaching of alternately coupling the first and second detector to the input and output of the amplifier. The input from the coupler 1328 and Up-Converter 1310 arrive at the comparator 1332 with a fixed relationship. This can be contrasted with the arrangement shown in Figure 2 of the present invention and described above.

Rejected Claims 7, 9, 11, 13 and 14 have the same limitations as Claim 1 and are considered allowable for the same reasons. Rejected Claims 2-4 are dependent on an allowable base Claim 1.

Examiner rejects claims 1, 4-14 under 35 USC §102(e) as being anticipated by Wessel et al (US 6,275,685).

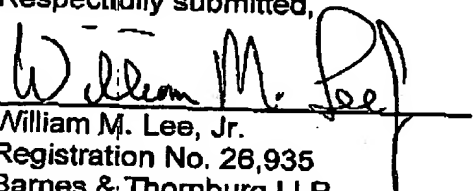
Examiner asserts that "Wessel et al discloses an identical invention" but, respectfully, Examiner appears to have overlooked one of the limitations of Claim 1 of the present invention. Figure 5 of Wessel shows an error detection subsystem which receives an input signal 42 and an output signal 54. The signals 42, 54 are fed to detectors 610, 612 and a difference amplifier 616. However, Wessel lacks "switch means (that) alternately couples a first and second detector means to the input and output of said amplifier". In Wessel the signals 42, 54 are applied to detectors 610, 612 with a fixed relationship.

Rejected Claims 7, 11, 13 and 14 recite a similar limitation and other rejected Claims 4-6, 8-10 and 12 are dependent on an allowable base claim.

For the foregoing reasons, Applicants respectfully submit that the claims pending in this application are in condition for allowance. Early issuance of a Notice of Allowance is solicited.

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Respectfully submitted,

  
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**In the Abstract**

Please cancel the current abstract and substitute with the replacement abstract attached.